

REMARKS

The Official Action dated February 14, 2008 has been carefully considered. Reconsideration is respectfully requested in light of the amendments and remarks presented herein.

Claims 1-2, 4-14, 17-24, 27-29, 32-33 and 36-40 are herein amended. Support for the amendments can be found in the specification and drawings as originally filed. It is believed that these amendments do not involve introduction of new matter, and entry is accordingly believed to be in order and is respectfully requested. Claims 1-42 accordingly remain in the present application and are believed to be in condition for allowance. Reconsideration is respectfully requested.

In the Official Action dated February 14, 2008, the Examiner objected to the oath as being defective. On August 6, 2008, a corrected declaration was submitted via EFS-Web and a copy of which is enclosed herewith. As such, Applicant believes the objection has been overcome and respectfully requests reconsideration.

Also in the Official Action, the Examiner rejected claims 5, 6, 14, 18-20, 22 and 40 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Claims 5, 6, 14, 18-20, 22 and 40 have been amended and Applicant believes these amendments overcome the rejections. Specifically in regard to claims 18-20, Applicant believes the subject matter embraced by the claims is clear and breadth of a claim is not to be equated with indefiniteness. *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). As such, Applicant believes claims 18-20 and 5, 6, 14, 22 and 40 overcome the rejection under 35 U.S.C. § 112, second paragraph and respectfully requests reconsideration.

In the Official Action, claims 1-12, 14-21 and 40-42 were rejected under 35 U.S.C. § 102(b) as being anticipated by and unpatentable over Hegde (U.S. Patent No. 6,067,557). The Examiner asserts that Hegde teaches determining whether a process is delinquent for utilizing a percentage of CPU resources above a desired threshold percentage by allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes. The Examiner also contends that Hegde teaches a throttling component that suspends a delinquent process because Hegde discloses a system with a preemptive priority environment and suggests that preemption is a type of suspension. In addition, the Examiner asserts that Hegde teaches a CPU bandwidth manager which determines which process is allocated the next tick of CPU bandwidth and suggests that this details a monitoring methods which further details how the system works to figure out adjustments to the time it takes for a process to get restarted and gives out a variable amount of time before the process starts again to meet the percentage requirements.

However, as will be set forth in detail below, it is submitted that the systems and methods as defined by claims 1-12, 14-21 and 40-42 are not anticipated by and are patentably distinguishable over Hegde. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

As defined by independent claim 1, from which claims 2-5 depend, the respective systems include a throttling component configured to suspend a delinquent process for a variable amount of time before resuming the process to reduce the percentage of CPU resources occupied by the delinquent process. As defined by independent claim 6, from which claims 7-12 and 14-21 depend, the respective methods include suspending the delinquent process for a variable time period to initiate throttling of the delinquent process and resuming the delinquent process to complete throttling of the delinquent process. As

defined by independent claim 40, from which claims 41-42 depend, the respective systems include means for suspending the delinquent process for a variable period of time and means for determining whether the process is still delinquent after suspension.

Hegde generally discloses allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes in a system (col. 4, lines 34-36). Moreover, Hegde also teaches that a share of a process may increase or decrease depending on how busy the system is and how much the process has to do (col. 5, lines 61-63). In addition, Hegde also teaches that once all of the processes have been completed the system loops back to register new processes (col. 7, lines 18-19).

Rejection for anticipation or lack of novelty requires, as the first step in the query, that all elements of the claimed invention be described in single reference. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989), *cert. denied*, 493 U.S.P.Q.853 (1989). Hegde does not teach respective systems and methods as recited independent claims 1, 6, or 40. With respect to independent claim 1, Hegde fails to teach a system having a throttling component configured to suspend a delinquent process for a variable amount of time before resuming the process to reduce the percentage of CPU resources occupied by the delinquent process. Rather Hegde only teaches processes that are assigned a specific amount of CPU resources and those processes are allocated that amount of CPU bandwidth (see col. 4, lines 34-36 and col. 6, lines 37-39), but Hegde never discloses or discusses a scenario of a process attempting to use more CPU resources and how its system would determine or handle such a scenario. As such, Hegde is absolutely silent on having a throttling component configured to suspend a delinquent process for a variable amount of time before resuming the process to reduce the percentage of CPU resources occupied by the delinquent process.

With respect to independent claims 6 and 40, which recite methods which include suspending the delinquent process for a variable time period to initiate throttling of the delinquent process and resuming the delinquent process to complete throttling of the delinquent process; and systems which include means for suspending the delinquent process for a variable period of time and means for determining whether the process is still delinquent after suspension, Hegde again fails to teach such systems and methods. As noted above, Hegde is focused on allocating a guaranteed amount of CPU resource to a process upon request, but does not disclose a process for suspending a delinquent process for a variable time period or a way of resuming the delinquent process after suspension. Hegde's teachings simply fail to recognize such systems and methods as recited in independent claims 6 and 40.

It is therefore submitted, that the presently claimed systems and methods are not anticipated by Hegde, whereby the rejection under 35 U.S.C. §102 has been overcome. Reconsideration is respectfully requested.

Also, in the Official Action, claims 13 and 22-39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hegde in view of Badovinatz et al. (U.S. Patent No. 5,748,958). As noted above, the Examiner asserts that Hegde discloses determining whether a process is delinquent for utilizing a percentage of CPU resources above a desired threshold percentage by allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes. The Examiner also contends that Hegde teaches a throttling component that suspends a delinquent process because Hegde discloses a system with a preemptive priority environment and suggests that preemption is a type of suspension. In addition, the Examiner asserts that Hegde teaches a CPU bandwidth manager which determines which process is allocated the next tick of CPU bandwidth and suggests that this details a monitoring methods which further details how the system works to figure out adjustments to the time it takes for a

process to get restarted and gives out a variable amount of time before the process starts again to meet the percentage requirements.

However, the Examiner notes that Hegde does not teach determining whether an exemption from CPU throttling exists, nor does it teach terminating monitoring of the delinquent process. But, the Examiner contends that Badovinat et al disclose determining whether an exemption from CPU throttling exists and also how to terminate monitoring of a delinquent process such that Badovinat et al teach determining if removal is needed and then removing processes from monitoring. Thus, the Examiner contends that it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teaching of Badovinat et al to have the capability of removing a process as disclosed by Hegde because one of the ordinary skill would be motivated to mitigate a system failure.

However, as will be set forth in detail below, it is submitted that the methods as defined by claims 13 and 22-39 are nonobvious and patentably distinguishable over Hegde in view of Badovinat et al. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

Badovinat et al generally disclose a system for managing membership of process groups of a distributed computing environment (abstract).

As noted above, Hegde fails to teach respective methods which include suspending the delinquent process for a variable time period to initiate throttling of the delinquent process and resuming the delinquent process to complete throttling of the delinquent process (see independent claim 6 from which claim 13 depends). Also with respect to independent claim 22, Hegde fails to teach determining whether a process is delinquent for occupying more than a predetermined percentage of CPU resources. As noted above, Hegde only

teaches processes that are assigned a specific amount of CPU resources and those processes are allocating that amount of CPU bandwidth (see col. 4, lines 34-36 and col. 6, lines 37-39), but Hegde never discloses or discusses a scenario of a process attempting to use more CPU resources and how its system would determine or handle such a scenario.

The failures of Hegde are also not remedied by the combination with Badovinat et al. Rather, Badovinat et al teach a system for managing membership of process groups of a distributed computing environment (see abstract). Again, there is no teaching of determining whether a process is delinquent for occupying more than a predetermined percentage of CPU resources or suspending the delinquent process for a variable time period to initiate throttling of the delinquent process and resuming the delinquent process to complete throttling of the delinquent process. In view of the failure of Hegde and Badovinat et al to teach or suggest the presently claimed methods as recited in claims 13 and 22-39, Hegde and Badovinat et al do not support a rejection under 35 U.S.C. § 103. Applicant therefore submits that the 35 U.S.C. § 103 rejection of the presently claimed methods of claims 13 and 22-39 over Hegde in view of Badovinat et al has been overcome. Reconsideration is respectfully requested.

It is believed that the above remarks provide a complete response to the objections and rejections under 35 U.S.C. §§ 102, 103 and 112, second paragraph, and as such, place the present application having claims 1-42 in condition for allowance. Reconsideration and an early allowance are requested.

For at least the reasons set forth above, Applicant respectfully request early allowance of claims 1-42. The Examiner is hereby invited to contact Applicants' undersigned counsel by telephone at (513) 698-5092 if the Examiner determines that such might expedite prosecution of the present application. The fee of five hundred twenty-five dollars (\$525.00) specified in 37 C.F.R. §1.17(a)(2) for a three month extension of time under 37

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C.F.R. §1.136(a) has been paid herewith. However, if any additional fees are necessary, the Commissioner may consider this an express authorization to charge any necessary fees to our Deposit Account No. 50-1884.

Respectfully submitted,

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